

**PDS Validation Tool Requirements
Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
AR01	Anne Raugh	Requirement (Modify)	"Solaris", to take one example, is not actually a description of a platform. The "Solaris 10" platform is very different from, say, the "Solaris 6" platform. Similarly, Windows XP is very different from Windows 2000, and the next Windows OS, which you can pretty much bet won't be particularly compatible with either of those, is due in a year or so.	So I strongly suspect that L5.VAL.NF.(8) will either make your life hell, or will have to be abandoned in favor of a substantially restricted set of platforms that may or may not be documented.	<u>Open 24-Jan-06</u> Related to RAS17. <u>Addressed 26-Feb-06</u> The L5.VAL.NF.8 requirement was reworded to "The Tool shall run on any PDS-supported platform." The actual platforms to be supported will be specified in a higher level requirement from which this requirement will be derived.	Addressed
AR02	Anne Raugh	Requirement (Move)	The requirement L5.VAL.FR.(15) is clearly in the wrong place.	It deals solely with an aspect of user interface, and thus should be in the non-functional requirements section with the rest of the interface requirements.	<u>Open 24-Jan-06</u> <u>Addressed 27-Mar-06</u> Requirement L5.VAL.FR.15 was deleted with its content incorporated into the new requirement L5.VAL.NF.11.	Addressed
DT01	David Tarico	Requirement (Modify)	L5.VAL.FR.9 bullet i Contrary to popular belief at EN (Steve Huges, Emily Law) the standards do not required fixed-width data tables to use comma-separated columns. It is only recommended. SBN only uses space-separated data tables.	Remove bullet (i) because there is no PDS requirement on the column delimitation.	<u>Open 4-Apr-06</u>	Open
DT02	David Tarico	Requirement (Modify)	L5.VAL.FR.9 Some checks describe the success case "has" and others express the failure case "does not have"	Describe all checks positively.	<u>Open 4-Apr-06</u> Related to SS17.	Open
DT03	David Tarico	Requirement (Remove)	L5.VAL.FR16 and L5.VAL.FR16 Generating data dictionaries and element templates isn't a part of the validation process that I am aware of. L4.VAL.FR.2 is cited as the source of these requirements, but these two items are not extensions of L4.VAL.FR.2 in my opinion.	Remove L5.VAL.FR16 and L5.VAL.FR16[17] or cite another source for their existence, and perhaps give an explanation of what role they serve in the validation process.	<u>Open 4-Apr-06</u> Related to RAS16 and TK12. <u>Addressed 5-Jul-06</u> Requirements L5.VAL.FR.16 and L5.VAL.FR.17 were deleted. This action was proposed and concurred with at the 1-Jun-06 telecon.	Addressed
DT04	David Tarico	Requirement (Remove)	L5.VAL.NF.11 bullet c To send e-mail, the tool would need to be aware of an e-mail server, which makes the tool more complicated to configure. This sounds like a possible case of over-engineering. Since a programmatic API is being provided, it would be possible to provide a separate plugin or wrapper tool for sending results through e-mail.	Cite a source that justifies a need for this level of complexity, or drop the requirement.	<u>Open 4-Apr-06</u> <u>Addressed 16-Jul-06</u> David makes a very good point. Requirement L5.VAL.NF.11 was modified to remove item c).	Addressed

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JSH01	Steve Hughes	Requirement (Add)	L5.VAL.FR.1 – Syntactic validation needs to be differentiated into “ODL grammar” validation and “Extended” validation. “Extended” refers to PDS syntactic extensions to or constraints on what is allowed in the ODL grammar .	Suggest two separate requirements. “Extended” syntactic validation focuses on PDS levied extensions or constraints to the ODL grammar, as documented in the Std Reference. (Actually, there could be some of these in Chapter 12.)	<p><u>Open 23-Feb-06</u> Related to SS10 and TK21.</p> <p><u>Addressed 1-Apr-06</u> Requirement L5.VAL.FR.24 (The Tool shall verify that the characters in a PDS label belong to a limited subset of the standard 7-bit ASCII character set as follows: ...) and requirement L5.VAL.FR.25 (The Tool shall verify that all lines in a PDS label are terminated with a carriage return character followed by a line feed character.) were added to the document.</p> <p>Both of these requirements represent PDS specific extensions or constraints on ODL that are not explicitly defined in chapter 12.</p> <p><u>Open 4-Apr-06</u> Additional issues raised in RFA TK21.</p> <p><u>Addressed 19-Jul-06</u> Requirements L5.VAL.FR.34, L5.VAL.FR.35, L5.VAL.FR.36 and L5.VAL.FR.37 were added to better represent requirements from chapters 5 and 7.</p>	Addressed
LH01	Lyle Huber	Requirement (Add)	section 4.1.2, do we want to explicitly say something about sequences and sets? I realize that this is already covered by Chapter 12 of the Standards Reference, but I just note it because ESA has encountered much grief in trying to validate sequences and sets. (I also think their grief could have been avoided with a slightly different coding technique.)		<p><u>Open 13-Jan-06</u></p> <p><u>Addressed 26-Feb-06</u> The syntactic specifications for sequences and sets are specified in chapter 12, sections 12.5.5 and 12.5.6 respectively. So, I believe requirement L5.VAL.FR.1 covers both of these items. Any concern regarding how the tool is implemented is more of a design issue and not a requirement issue.</p> <p><u>Closed 4-Apr-06</u> Accepted by L. Huber.</p>	Closed
LH02	Lyle Huber	Requirement (Modify)	L.5.VAL.FR.(10), some of the wording here should be slightly different than for TABLE, i.e., maximum values for record_bytes, etc.		<p><u>Open 13-Jan-06</u></p>	Open

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MC01	Mike Cayanan	Requirement (Add)	Current tools are able to validate an SFDU if we see it in a label. I know that PDS no longer supports it and it is no longer required in a label, but from what I understand, a lot of the older data sets have these SFDUs. I am uncertain about how old of a data set we want to support with the next gen tool.	If we want the tools to still be able to validate an SFDU, then we should have another requirement that says that the tools shall validate an SFDU if it is present in a label. Or you can say "as described in Chapter 16 of the standards", which describes SFDU usage.	<p><u>Open 23-Feb-06</u></p> <p><u>Addressed 1-Apr-06</u> Requirement L5.VAL.FR.26 (The Tool shall validate a Standard Formatted Data Unit (SFDU), if present in a PDS label, as specified in chapter 16 of the PDS Standards Reference [2].) was added to the document.</p> <p><u>Closed 5-Apr-06</u> Accepted by M. Cayanan.</p> <p><u>Open 1-Jun-06</u> Reopened by S. Hardman for clarification of actual validation.</p> <p><u>Addressed 20-Jul-06</u> Modified requirement L5.VAL.FR.26 to be more specific as to the validation to be performed and added requirement L5.VAL.FR.38 (The Tool shall report the existence of a Standard Formatted Data Unit (SFDU), if encountered in a PDS label.) in response action item 4 from the 1-Jun-2006 telecon.</p>	Addressed
MC02	Mike Cayanan	Requirement (Add)	lvtool has the option to handle aliases found in a label, but the requirements for this next gen tool does not mention anything regarding the ability to handle this feature.	If this is a feature that we will still be supporting, then I think that we should have a requirement that says that the Tool shall handle keyword aliases if it is present in the label. I would recommend running this by the users (Anne, Susie, Todd, etc.) and see what they think first.	<p><u>Open 23-Feb-06</u></p>	Open
MC03	Mike Cayanan	Requirement (Add)	I think that there should be a requirement stating that the tools will be able to handle attached and detached labels.		<p><u>Open 23-Feb-06</u></p> <p><u>Addressed 1-Apr-06</u> Requirement L5.VAL.FR.22 (The Tool shall be able to validate a PDS data product that has been constructed with one of the following methods: a) Attached Label b) Detached Label c) Combined Detached Label) was added to the document.</p> <p><u>Closed 5-Apr-06</u> Accepted by M. Cayanan.</p>	Closed

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MG01	Mitch Gordon	Requirement (Modify)	MD5 has not yet been accepted as the PDS wide checksum option of choice.	Throughout, replace "MD5" with "the PDS approved"	<p><u>Open 23-Feb-06</u> Related to RAS08, SS15 and TK25.</p> <p><u>Addressed 26-Feb-06</u> Deleted requirements L5.VAL.FR.6 and L5.VAL.FR.8 since both were related to withdrawn SCR 3-1035. Reworded requirements L5.VAL.FR.5 and L5.VAL.FR.7, replacing "MD5" with "PDS approved" and removed the verbage limiting the checksum capability to just data product files.</p> <p><u>Open 5-Apr-06</u> Not accepted by M. Gordon.</p> <p><u>Addressed 5-Jul-06</u> Deleted requirements L5.VAL.FR.5 and L5.VAL.FR.7. This action was proposed and concurred with at the 1-Jun-2006 telecon.</p>	Addressed
MG02	Mitch Gordon	Requirement (Add)		Add a requirement that the tool check all *.CAT files for 'ID's (e.g., DATASET_ID, REFERENCE_KEY_ID, etc.) and add the corresponding values to its list of 'Standard values' for use in the current validation run. Perhaps include these in the log file and also identify which were not already standard values.	<p><u>Open 23-Feb-06</u></p> <p><u>Tabled 19-Mar-06</u> This capability is beyond the current scope of the document. This capability will be revisited when the scope of the document is widened.</p> <p><u>Open 5-Apr-06</u> Not accepted by M. Gordon.</p> <p><u>Addressed 16-Jul-06</u> This RFA has been resolved by the proposal for action item 1 from the 1-Jun-2006 telecon. Option 1 of the proposal provides for standard values to be provided as input to the tool in the form of a local dictionary. Automated generation of this file will be addressed in a future release of the tool.</p>	Addressed

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RAS01	Dick Simpson	Scope	1.2: Scope has been changed from what MC requested. MC wanted tools for label and product validation before label and product generation; it said nothing about phases and did not distinguish documents and INDEX, AAREADME, and VOLDESC files from others. There is potential for hair splitting here that will result in damage to the definition of what a "product" is; and that is not at all where we should be in setting Tool Requirements.	Adopt a more general view of the scope of the validation task; or make this one of several modules that will address the whole (e.g., I would accept "documents" as being lower priority to MC than "data"; but they both need to be done).	<p><u>Open 24-Feb-06</u></p> <p><u>Addressed 28-Feb-06</u> Just for clarification, label generation isn't mentioned here because I assume that those requirements will be captured in a separate document. Section 1.2 was reworded as follows: "The scope of this document specifically focuses on PDS label and product validation, as directed by the PDS Management Council on October 5, 2005 at the Management Council face-to-face meeting. This document will be extended to cover other aspects of validation (e.g. catalog, volume and data set validation) per the direction of the PDS Management Council as future efforts are prioritized relative to tool development."</p> <p><u>Open 21-Apr-06</u> Not accepted by D. Simpson.</p> <p><u>Tabled 25-Jul-06</u> This RFA and D. Simpson's additional comments on the proposed action for this RFA will be addressed in a future version of the document.</p>	Tabled
RAS02	Dick Simpson	Derivation	Derivation of Tool Requirements must come from MC-approved Level 3 requirements; attempting to derive them from Level 2 requirements is potentially dangerous, defeats the purpose of the exercise, and should be limited (if allowed at all) to in-house brainstorming (not formal reviews with RFA's). At best, there will need to be a lot of retrofitting once the L3 Requirements are in place; at worst, the results could be useless.	Wait for L3 Requirements; or focus on real tools and save the document for later. Substitute in Section 1.5 the PDS Level 1/2/3 Requirements.	<p><u>Open 24-Feb-06</u> Related to SS02, SS08 and TK03.</p> <p><u>Addressed 19-Mar-06</u> The reality is that the EN is receiving pressure to develop and deploy a new validation tool from HQ, MC and missions. The tool specified by the requirements is essentially a replacement of an existing tool, with many of the requirements derived directly from the functionality of that tool or the PDS standards. So, the requirements are being developed on a best effort basis given these circumstances.</p> <p>Although there may be other relevant level 3 requirements pertaining to the Validation Tool, the main requirement (1.5.3) has been approved and the level 4 requirement derivations have been modified accordingly.</p> <p><u>Open 4-Apr-06</u> Due to non-acceptance of related RFAs.</p> <p><u>Addressed 16-Jul-06</u> As a result of the newly approved level 3 requirements, the level 4 requirements were retraced and modified slightly including collapsing L4.VAL.FR.1.1 and L4.VAL.FR.1.2 into L4.VAL.FR.1 and adding L4.VAL.FR.3.</p>	Addressed

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RAS03	Dick Simpson	References (Remove)	Applicable Document [4] was an activity, not a document. If there is an associated document, [4] is an inadequate citation. But [4] never appears in THIS document, so it's not needed.	Omit [4] from list of Applicable Documents	<p><u>Open 24-Feb-06</u></p> <p><u>Addressed 26-Feb-06</u> Actually, [4] is referenced in section 4.0. The Tools Survey reference was moved from the Applicable Documents section into a new section titled Other References.</p> <p><u>Closed 21-Apr-06</u> Accepted by D. Simpson.</p>	Closed
RAS04	Dick Simpson	Body (Modify)	The Document Maintenance proposed is entirely inappropriate for an activity of this type. Both the requirements and also the document itself need to be under some level of configuration control. It is inconceivable that "requests from the PDS user community" could, by themselves, trigger changes in either.	Adopt "common practice" configuration control procedures and substitute the corresponding language.	<p><u>Open 24-Feb-06</u> Related to TK01.</p> <p><u>Addressed 26-Feb-06</u> The section (now 1.8) was reworded as follows: "It is anticipated that additional phases of development will be defined and approved by the Management Council resulting in modifications to this document. This document and the requirements specified herein, will be kept under configuration control with any modifications submitted to the Management Council for approval."</p> <p><u>Closed 21-Apr-06</u> Accepted by D. Simpson.</p>	Closed
RAS05	Dick Simpson	Body (Remove)	Section 2.0: Nothing in PDS L1/2 requires that the (new) tool set be a recycled, re-integrated version of the old. Thus this statement of "concept" already has strayed significantly from the originally stated objective of deriving Tool Requirements from L2. In general, I found Section 2.0 to be off target and distracting. A concept statement may eventually be helpful at this point in the document; but this is not it.	Omit 2.0 — at least for now.	<p><u>Open 24-Feb-06</u></p> <p><u>Addressed 1-Mar-06</u> Removed section 2.0.</p> <p><u>Closed 21-Apr-06</u> Accepted by D. Simpson.</p>	Closed
RAS06	Dick Simpson	Body (Modify)	L4.VAL.FR.2: The explanatory sentence is narrower, and the result potentially less useful, than the requirement statement itself.	"The report lists criteria and whether the label or object is compliant."	<p><u>Open 24-Feb-06</u></p> <p><u>Addressed 26-Feb-06</u> Removed the comment for requirement L4.VAL.FR.2.</p> <p><u>Closed 21-Apr-06</u> Accepted by D. Simpson.</p>	Closed
RAS07	Dick Simpson	Body (Modify)	Section 4.1.1 "governs ensuring" is an unnecessarily oblique way of saying "ensures".	Substitute "ensures" for "governs ensuring"	<p><u>Open 24-Feb-06</u></p> <p><u>Addressed 26-Feb-06</u> Replaced "governs ensuring" with "ensures" in first paragraph of section (now 3.1.2).</p> <p><u>Closed 21-Apr-06</u> Accepted by D. Simpson.</p>	Closed

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RAS08	Dick Simpson	Requirement (Remove)	The half page of MD5 requirements based on the presumed outcome from SCR 3-1034 is a misguided attempt to work the requirements process from the bottom up. MD5 can be justified as "useful" in ensuring data integrity; but it's not the sole answer and the detailed requirements in L5.VAL.FR.(5) through L5.VAL.FR.(8) regarding what should be checked and how far outstrip any consensus within the Tech Session of today.	Remove L5.VAL.FR.(5) through L5.VAL.FR.(8) and substitute something more generic, along the lines of "The Tool shall have the capability to calculate an MD5 checksum against the contents of any file."	<p><u>Open 24-Feb-06</u> Related to MG01, SS15 and TK25.</p> <p><u>Addressed 26-Feb-06</u> Deleted requirements L5.VAL.FR.6 and L5.VAL.FR.8 since both were related to withdrawn SCR 3-1035. Reworded requirements L5.VAL.FR.5 and L5.VAL.FR.7, replacing "MD5" with "PDS approved" and removed the verbage limiting the checksum capability to just data product files.</p> <p><u>Open 5-Apr-06</u> Due to non-acceptance of related RFAs.</p> <p><u>Addressed 5-Jul-06</u> Deleted requirements L5.VAL.FR.5 and L5.VAL.FR.7. This action was proposed and concurred with at the 1-Jun-2006 telecon.</p>	Addressed
RAS09	Dick Simpson	Body (Add)	Middle of Page 9: Terms like "primary" data objects, and "secondary" data are not universally accepted — and their use isn't necessary in a context like this.	List objects explicitly.	<p><u>Open 24-Feb-06</u> Related to SS03 and SS16.</p>	Open
RAS10	Dick Simpson	Body (Add)	Middle of Page 9: Checking TABLE but not COLUMN seems pointless; likewise SPREADSHEET without FIELD.	Expand the list to include at least COLUMN and FIELD.	<p><u>Open 24-Feb-06</u></p>	Open
RAS11	Dick Simpson	Requirement (Modify/Add)	L5.VAL.FR.(9) - d) is not possible as stated, difficult if multiple objects per file; h) what characters are invalid? i) record delimiters are checked, but not column delimiters.	d) revise algorithm (row_bytes*rows?); but how do you tell where one object ends and another begins if both have the same structure? h) Standards Ref Ch 3 says very little about character data. i) Add requirement to check column delimiters (if any).	<p><u>Open 24-Feb-06</u></p>	Open
RAS12	Dick Simpson	Requirement (Modify)	L5.VAL.FR.(12) a) "Line number" has no meaning in a binary file.	Substitute "location"	<p><u>Open 24-Feb-06</u></p> <p><u>Addressed 26-Feb-06</u> Requirement L5.VAL.FR.12, item a), was modified replacing "Line number" with "The location". Requirement L5.VAL.FR.14, item c), was also modified replacing "line number" with "location".</p> <p><u>Closed 21-Apr-06</u> Accepted by D. Simpson.</p>	Closed
RAS13	Dick Simpson	Requirement (Add)	L5.VAL.FR.(13) requires a software-readable XML formatted output; I see nothing about human-readable output.	Add a human-readable output requirement.	<p><u>Open 24-Feb-06</u></p> <p><u>Addressed 26-Feb-06</u> Requirement L5.VAL.FR.18 (The Tool shall be capable of reporting the results of validation in a human-readable format.) was added to the document.</p> <p><u>Closed 21-Apr-06</u> Accepted by D. Simpson.</p>	Closed

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RAS14	Dick Simpson	Requirement (Modify)	L5.VAL.FR.(12) lists three pieces of information that must be included in each anomaly report; the example in L5.VAL.FR.(13) omits the first.	Make examples consistent with remainder of document.	<p><u>Open 24-Feb-06</u></p> <p><u>Addressed 26-Feb-06</u> The example was removed from L5.VAL.FR.13. See RFA SH01 for another modification to this requirement.</p> <p><u>Closed 21-Apr-06</u> Accepted (sort of) by D. Simpson.</p>	Closed
RAS15	Dick Simpson	Requirement (Add)	L5.VAL.FR.(15) requires delivery of reports to e-mail addresses; many users would prefer to have output to a screen or local disk file.	Add requirement that report output be to standard-output or equivalent.	<p><u>Open 24-Feb-06</u></p> <p><u>Addressed 27-Mar-06</u> Requirement L5.VAL.FR.15 was deleted with its content incorporated into the new requirement L5.VAL.NF.11. This new requirement also includes delivery of the validation report to standard out as well as a specified file.</p> <p><u>Closed 21-Apr-06</u> Accepted (sort of) by D. Simpson.</p>	Closed
RAS16	Dick Simpson	Requirement (Remove)	L5.VAL.FR.(16) and (17): I see no connection between these and L2. I see no way that data dictionary definitions could be generated on the fly by a "validation" tool. At best these make sense only as requirements for a "generation" tool.	Omit these requirements.	<p><u>Open 24-Feb-06</u> Related to DT03 and TK12.</p> <p><u>Addressed 27-Mar-06</u> There was quite a bit of discussion regarding these two requirements during the review and the feedback regarding the capabilities they describe was pretty positive. It is my understanding that kwvtool offers some of what is described by L5.VAL.FR.16 and that ddict offers some of what is described by L5.VAL.FR.17. Both of these requirements were slightly reworded as a result of RFA SH02. If the consensus is that these requirements are better suited to a generation tool, then I will pull them from this document.</p> <p><u>Open 4-Apr-06</u> Due to related RFAs and Dick's less than resounding acceptance.</p> <p><u>Addressed 5-Jul-06</u> Requirements L5.VAL.FR.16 and L5.VAL.FR.17 were deleted. This action was proposed and concurred with at the 1-Jun-2006 telecon.</p>	Addressed

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RAS17	Dick Simpson	Requirement (Remove)	L5.VAL.NF.(8): It is inappropriate in a Tool Requirements Document to specify which platforms PDS will support.	Omit the requirement from this document. Make sure the requirement is covered somewhere else (L3?) and that the list is readily accessible to anyone who needs it.	<p><u>Open 24-Feb-06</u> Related to AR01.</p> <p><u>Addressed 26-Feb-06</u> Requirement L5.VAL.NF.8 was reworded to "The Tool shall run on any PDS-supported platform.". The actual platforms to be supported will be specified in a higher level requirement from which this requirement will be derived.</p> <p><u>Closed 21-Apr-06</u> Accepted by D. Simpson.</p>	Closed
RAS18	Dick Simpson	Requirement (Add)	Many tools with a command line interface use "?" or the "-h" option to provide a terse syntax summary. I see nothing in the requirements that would provide this.	Add the "-h" option (or equivalent)	<p><u>Open 24-Feb-06</u></p> <p><u>Addressed 19-Mar-06</u> Requirements L5.VAL.NF.6 and L5.VAL.NF.10, providing configurable parameters and documentation for use respectively, address this capability at a higher level. The level of detail requested is more appropriate at the design level.</p> <p><u>Closed 21-Apr-06</u> Accepted by D. Simpson.</p>	Closed
SH01	Sean Hardman	Requirement (Modify)	The discussion during the review regarding requirement L5.VAL.FR.13, makes me think that the requirement represents a design detail.	Remove the "XML" reference from the requirement and just refer to a software-readable format.	<p><u>Open 26-Feb-06</u></p> <p><u>Addressed 26-Feb-06</u> Requirement L5.VAL.FR.13 was reworded to "The Tool shall be capable of reporting the results of validation in a software-readable format." Also removed the XML example.</p> <p><u>Closed 26-Feb-06</u> Accepted by S. Hardman.</p>	Closed
SH02	Sean Hardman	Requirement (Modify)	As discussed in the review, the requirements L5.VAL.FR.16 and L5.VAL.FR.17 reference definitions when they should probably reference templates and elements are found in the labels.	Modify the requirements to replace references to "data product" with "PDS label" and "definition" with "template".	<p><u>Open 26-Mar-06</u></p> <p><u>Addressed 26-Mar-06</u> Requirement L5.VAL.FR.16 was reworded to "The Tool shall be capable of generating data dictionary element definition templates for elements and element values referenced in the PDS label but not in the PSDD." Requirement L5.VAL.FR.17 was reworded to "The Tool shall be capable of generating a data dictionary, in standard ODL format, of element definitions for elements referenced in the PDS label."</p> <p><u>Closed 26-Mar-06</u> Accepted by S. Hardman.</p>	Closed

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SH03	Sean Hardman	Requirement (Remove)	As discussed in the review, the requirement L5.VAL.FR.4 should be revisited based on the content of chapter 17 of the Standards Reference.	Remove the requirement since chapter 17 has no bearing on the validation of PDS labels.	Open 1-Apr-06 Addressed 1-Apr-06 Requirement L5.VAL.FR.4 was removed. Closed 1-Apr-06 Accepted by S. Hardman.	Closed
SS01	Susie Slavney	Body (Modify)	Section 2.0, Validation Tool Concept, states that the goal is to replace the current set of tools with a more integrated tool. The text does not explicitly state which of the old tools are being replaced by the new, integrated tool.	List the old tools that are being replaced. Obviously Ivtool is one of them; are there others? If there is only the one tool being replaced, then it's not clear what the term "integration" refers to.	Open 24-Feb-06 Addressed 1-Mar-06 Removed section 2.0 per RFA RAS05. To answer your question, initially portions of Ivtool, kwvtool, tbtool and table_check will be replaced by the new tool. Ultimately, all of the above tools and any other tools found in the PDS Tool Package, that are used for validation, should be replaced, except for NASAView. Closed 10-Apr-06 Accepted by S. Slavney.	Closed
SS02	Susie Slavney	Derivation	Section 3.0, Level 4 Requirements, states that "Since the level 3 requirements are currently in preparation and review ... the following set of level 4 requirements have been derived directly from the level 2 requirements." If a new level 3 requirement appears that is not addressed by these level 4 requirements, how will this be handled?	The Validation Tool Requirements document should carry a lien that when the level 3 requirements have been determined, the document will be revised to show the derivation of level 4 requirements from level 3, and new validation tool requirements will be added if necessary.	Open 24-Feb-06 Related to RAS02, SS08 and TK03. Addressed 19-Mar-06 The reality is that the EN is receiving pressure to develop and deploy a new validation tool from HQ, MC and missions. The tool specified by the requirements is essentially a replacement of an existing tool, with many of the requirements derived directly from the functionality of that tool or the PDS standards. So, the requirements are being developed on a best effort basis given these circumstances. Although there may be other relevant level 3 requirements pertaining to the Validation Tool, the main requirement (1.5.3) has been approved and the level 4 requirement derivations have been modified accordingly. Open 4-Apr-06 Due to non-acceptance of related RFAs. Addressed 16-Jul-06 As a result of the newly approved level 3 requirements, the level 4 requirements were retraced and modified slightly including collapsing L4.VAL.FR.1.1 and L4.VAL.FR.1.2 into L4.VAL.FR.1 and adding L4.VAL.FR.3.	Addressed

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Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
SS03	Susie Slavney	Body (Add) & Requirement (Add)	Section 4.1.3, Content Validation, states that "Content validation for specific data object types will be limited to the Primary Data Objects (e.g. TABLE, SPREADSHEET and IMAGE) as defined in chapter 4 of the PDS Standards Reference." Following this are requirements for validating TABLE, SPREADSHEET, and IMAGE objects. Chapter 4 of the Standards Reference also lists SERIES and SPECTRUM as primary data objects, and should probably list QUBE and SPECTRAL_QUBE as well, yet there are no specific validation requirements for these objects.	State that the validation requirements for TABLE objects apply to SERIES and SPECTRUM objects as well. Add a set of validation requirements for QUBE / SPECTRAL QUBE that are the same as the requirements for IMAGE but that include side and back planes as appropriate. Also, add to requirement (b), which checks mean, standard deviation, minimum and maximum, that the keywords SCALING_FACTOR and OFFSET should be applied to these calculations if they are present in the label.	<u>Open 24-Feb-06</u> Related to RAS09 and SS16.	Open
SS04	Susie Slavney	Requirement (Add)	Requirement L5.VAL.FR.(11), part b, concerns computing the mean, standard deviation, minimum and maximum values in an image. It does not state that the computation should include SCALING_FACTOR and OFFSET if those keywords are present in the image.	Add to the requirement that the keywords SCALING_FACTOR and OFFSET should be applied to these calculations if they are present in the label.	<u>Open 24-Feb-06</u>	Open
SS05	Susie Slavney	Requirement (Modify)	Requirement L5.VAL.FR.(11), part a, requires that the Tool shall be able to validate that an image object has the correct number of total bytes as calculated from the label keywords. This will be harder than it sounds if the label is attached to the image, and if there are other objects present in the file such as headers, histograms, history records, etc.	The computation needs to use all the objects in the file, if it is being checked against the file size.	<u>Open 24-Feb-06</u>	Open
SS06	Susie Slavney	Scope	Section 1.2: Does the scope include catalog files? One catalog file, VOLDESC.CAT, is in the list of excluded items. The scope section also refers to Phase 1. If there is a Phase 1, then other phases should already be defined. Where is the overall tool development plan for production and validation documented?		<u>Open 3-Feb-06</u> <u>Addressed 1-Mar-06</u> Per RFA RAS01, section 1.2 was reworded as follows: "The scope of this document specifically focuses on PDS label and product validation, as directed by the PDS Management Council on October 5, 2005 at the Management Council face-to-face meeting. This document will be extended to cover other aspects of validation (e.g. catalog, volume and data set validation) per the direction of the PDS Management Council as future efforts are prioritized relative to tool development." As I stated at the review, catalog file validation is not included in this initial effort. I also removed any references to phases per Dick's request. <u>Closed 10-Apr-06</u> Accepted by S. Slavney.	Closed

**PDS Validation Tool Requirements
Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
SS07	Susie Slavney	Body (Modify)	Section 2.0: There is mention of the "PDS model". A reference to the model should be provided. The statement of the "goal" is a bit ambiguous. For example, what will the new tool be more integrated into? What does recasting the current tools as a framework mean?		<p><u>Open 3-Feb-06</u> Related to TK02.</p> <p><u>Addressed 1-Mar-06</u> Removed section 2.0 per RFA RAS05.</p> <p><u>Closed 10-Apr-06</u> Accepted by S. Slavney.</p>	Closed
SS08	Susie Slavney	Derivation	Section 3.0: Todd King expressed concerns about how the level 4 requirements are being derived from level 2. Geosciences Node has the same concerns.		<p><u>Open 3-Feb-06</u> Related to RAS02, SS02 and TK03.</p> <p><u>Addressed 19-Mar-06</u> The reality is that the EN is receiving pressure to develop and deploy a new validation tool from HQ, MC and missions. The tool specified by the requirements is essentially a replacement of an existing tool, with many of the requirements derived directly from the functionality of that tool or the PDS standards. So, the requirements are being developed on a best effort basis given these circumstances.</p> <p>Although there may be other relevant level 3 requirements pertaining to the Validation Tool, the main requirement (1.5.3) has been approved and the level 4 requirement derivations have been modified accordingly.</p> <p><u>Open 4-Apr-06</u> Due to non-acceptance of related RFAs.</p> <p><u>Addressed 16-Jul-06</u> As a result of the newly approved level 3 requirements, the level 4 requirements were retraced and modified slightly including collapsing L4.VAL.FR.1.1 and L4.VAL.FR.1.2 into L4.VAL.FR.1 and adding L4.VAL.FR.3.</p>	Addressed
SS09	Susie Slavney	Requirement (Modify)	L4.VAL.FR.1 - What compliance is being tested for: the PSDD, Standard reference, SIS? Why does the tool only ASSIST users in testing for compliance? If the product "passes" the tool, is it compliant or not?		<p><u>Open 3-Feb-06</u></p> <p><u>Addressed 19-Mar-06</u> Requirements L4.VAL.FR.1, L4.VAL.FR.1.1 and L4.VAL.FR.1.2 have been reworded to include compliance with the PDS Standards. The level 4 requirements use the term "assist" mimicing the level 3 requirement from which they were derived. The level 5 requirements state that the tool will determine compliance and not just assist.</p> <p><u>Closed 10-Apr-06</u> Accepted by S. Slavney.</p>	Closed

**PDS Validation Tool Requirements
Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
SS10	Susie Slavney	Requirement (Add)	Section 4.1.1: What about additional requirements such as proper line terminators and only using ASCII 7-bit characters as specified in Std. Ref. Section 5.1.2, which may be more restrictive than ODL.		<p><u>Open 3-Feb-06</u> Related to JSH01 and TK21.</p> <p><u>Addressed 1-Apr-06</u> Requirement L5.VAL.FR.24 and requirement L5.VAL.FR.25 were added to the document.</p> <p><u>Open 4-Apr-06</u> Accepted by S. Slavney but RFA TK21 raised additional issues.</p> <p><u>Addressed 19-Jul-06</u> Requirements L5.VAL.FR.34, L5.VAL.FR.35, L5.VAL.FR.36 and L5.VAL.FR.37 were added to better represent requirements from chapters 5 and 7.</p>	Addressed
SS11	Susie Slavney	Requirement (Add)	Section 4.1.2: Tool should test for required keywords as specified in Std. Ref. Sections 5.3.4.1-3 and file name standards in Chapter 10.		<p><u>Open 3-Feb-06</u></p> <p><u>Tabled 1-Apr-06</u> The standards pertaining to specific types of data product labels found in section 5.3.4 of the Standards Reference, appears to be closely related to the capability requested in RFA SS22, which has been tabled for now.</p> <p>The file naming standards found in chapter 10 seem more appropriate for volume validation, which is not covered by the current scope of the document.</p>	Tabled
SS12	Susie Slavney	Requirement (Add)	L5.VAL.FR.2: Tool must be able to use local data dictionaries in addition to the PSDD.		<p><u>Open 3-Feb-06</u> Related to TK23.</p> <p><u>Addressed 1-Apr-06</u> Requirements L5.VAL.FR.2, L5.VAL.FR.2.1, L5.VAL.FR.2.2, L5.VAL.FR.2.3 and L5.VAL.FR.2.4 were modified replacing "the PSDD" with "the specified instance(s) of the PSDD".</p> <p><u>Open 4-Apr-06</u> Accepted by S. Slavney but RFA TK23 raised additional issues.</p> <p><u>Addressed 16-Jul-06</u> Requirements L5.VAL.FR.2, 2.1, 2.2 and 2.3 were modified to replace "in the specified instance(s) of the PSDD" with "as specified in one or more PDS compliant data dictionaries".</p>	Addressed

**PDS Validation Tool Requirements
Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
SS13	Susie Slavney	Requirement (Add)	L5.VAL.FR.3: Tool needs to verify that each data file pointed to exists. Also verify that ^structure and other pointed to files exist (these could be optional checks if the complete archive volume is not available).		<p><u>Open 3-Feb-06</u> Related to TK10.</p> <p><u>Addressed 26-Mar-06</u> Requirement L5.VAL.FR.19 (The Tool shall verify that a file exists when referenced by a pointer in the PDS label.) was added to the document.</p> <p><u>Closed 10-Apr-06</u> Accepted by S. Slavney.</p>	Closed
SS14	Susie Slavney	Requirement (Add)	The tool should be able to find and use format files as part of the label.		<p><u>Open 3-Feb-06</u> Related to TK18</p> <p><u>Addressed 1-Apr-06</u> Requirement L5.VAL.FR.23 (The Tool shall include the contents of external files referenced by ^STRUCTURE pointers when validating a PDS label.) was added to the document.</p> <p><u>Open 4-Apr-06</u> Accepted by S. Slavney but RFA TK18 raised additional issues.</p> <p><u>Addressed 16-Jul-06</u> Modified requirement L5.VAL.FR.23 to be (The Tool shall be able to merge the contents of label fragments referenced by ^STRUCTURE pointers with the contents of the parent label when validating a PDS label.). The rest of this RFA has been resolved by the proposal for action item 2 from the 1-Jun-2006 telecon. Requirements L5.VAL.FR.27 (The Tool shall validate a PDS label fragment as it would a PDS label with the following exceptions: a) An SFDU label must not be contained in the label fragment. b) A PDS_VERSION_ID statement must not be contained in the label fragment. c) An END statement must not be contained in the label fragment.) and L5.VAL.FR.28 (The Tool shall identify files having an extension of FMT as a PDS label fragment.) were added.</p>	Addressed

**PDS Validation Tool Requirements
Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
SS15	Susie Slavney	Requirement (Modify)	L5.VAL.FR.5: Maybe it is not a good idea to specifically list MD5 for checksums because PDS has not agreed to use MD5 yet.		<p><u>Open 3-Feb-06</u> Related to MG01, RAS08 and TK25.</p> <p><u>Addressed 26-Feb-06</u> Deleted requirements L5.VAL.FR.6 and L5.VAL.FR.8 since both were related to withdrawn SCR 3-1035. Reworded requirements L5.VAL.FR.5 and L5.VAL.FR.7, replacing "MD5" with "PDS approved" and removed the verbage limiting the checksum capability to just data product files.</p> <p><u>Open 5-Apr-06</u> Due to non-acceptance of related RFAs.</p> <p><u>Addressed 5-Jul-06</u> Deleted requirements L5.VAL.FR.5 and L5.VAL.FR.7. This action was proposed and concurred with at the 1-Jun-2006 telecon.</p>	Addressed
SS16	Susie Slavney	Body (Add) & Requirement (Add)	Middle of page 9. The use of primary data objects is confusing. The text refers to Chapter 4 of the Std. Ref. The way primary is used in Chapter 4 is that the primary data object is the main data returned by an instrument and that secondary objects are more ancillary information. The wording does not indicate that the objects listed under primary are the most used or the most important objects in PDS. Given that the list in Chapter also includes series, spectrum, and qube, should there be level 5 requirements for other objects?		<p><u>Open 3-Feb-06</u> Related to RAS09 and SS03.</p>	Open
SS17	Susie Slavney	Requirement (Modify/Add)	L5.VAL.FR.9 items H-M and L5.VAL.FR.10 items I-N: Requirements are currently written as if these errors are acceptable. Re-write to be consistent with the earlier items in the lists. For item H of FR.9, is it an error for data in a table to contain "invalid" ascii characters? Because the format keyword is optional, these checks can be done only if the format keyword is used. The record delimiter and format checks can only be done for ASCII tables and not binary ones. So it would be clearer if the requirements specifically stated which tests apply to ASCII vs. binary tables.		<p><u>Open 3-Feb-06</u> Related to DT02.</p>	Open
SS18	Susie Slavney	Requirement (Add)	L5.VAL.FR.11: Item b: It would be nice for the tool to be able to report the mean, std dev, max and min in the image even if those keywords are not present in the label. Item c: Consider adding a requirement to verify that the sample_type is correct (signed vs unsigned, IEEE, LSB, MSB, etc.)		<p><u>Open 3-Feb-06</u></p>	Open

**PDS Validation Tool Requirements
Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
SS19	Susie Slavney	Requirement (Add)	L5.VAL.FR.12: Clearly the reporting function needs to be improved over the current Ivtool, whose reports are very difficult to read and interpret. One suggestion is to print the offending label line (i.e., entire keyword=value statement). Currently, one has to go find the label and open it in an editor to understand what the issue is. This is especially troublesome for labels attached to large binary files.		<u>Open 3-Feb-06</u> <u>Addressed 26-Feb-06</u> Requirement L5.VAL.FR.12 has been modified to add item "b) The content of the line triggering the anomaly." <u>Closed 10-Apr-06</u> Accepted by S. Slavney.	Closed
SS20	Susie Slavney	Requirement (Add)	The tool needs to validate a set of files as well as a single file. Was this stated as a requirement? The set of files could be as large as a thousand or so.		<u>Open 3-Feb-06</u> Related to TK19. <u>Addressed 1-Apr-06</u> Requirement L5.VAL.FR.21 (The Tool shall be able to validate one or more PDS data products as the result of a single tool execution.) was added to the document. <u>Open 4-Apr-06</u> Accepted by S. Slavney but RFA TK19 raised additional issues. <u>Addressed 16-Jul-06</u> Requirements L5.VAL.FR.29 (The Tool shall be able to validate all PDS data products in a directory.) and L5.VAL.FR.30 (The Tool shall be able to traverse a directory tree and recursively validate the content of all directories.) were added to the document.	Addressed
SS21	Susie Slavney	Requirement (Modify)	L5.VAL.NF.6: Please clarify the intent of this requirement. Does it mean that the user may select which tests to apply?		<u>Open 3-Feb-06</u> <u>Addressed 1-Mar-06</u> Yes, to some extent the users will be able to select tests to apply and report formats and whatnot. The set of configurable parameters will be determined during the design phase. <u>Closed 10-Apr-06</u> Accepted by S. Slavney.	Closed

**PDS Validation Tool Requirements
Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
SS22	Susie Slavney	Requirement (Add)	Please consider how the tool may validate the label against its SIS. The current Ivtool indicates whether a label is consistent with the PSDD in terms of allowable keywords, standard values, and objects. But it does not test whether the label has the keywords or objects that it is supposed to have according to the SIS. The tool should check that the label has the keywords listed in the SIS and that the keywords are in the correct objects. Keywords should have the correct values listed in the SIS, which will be a much more restricted set than what is in the PSDD. The tool should check that the keyword values are context sensitive with respect to the data set. For example, if the data set id is for a data set produced by the CRISM instrument, then the instrument_name (or ID) should be CRISM. There may be other rules in the SIS for file name convention or product_id formation that could be checked for. The Geosciences Node has several ideas about how this could be done, if you are interested in discussing this.		<u>Open 3-Feb-06</u> <u>Tabled 19-Mar-06</u> This is definitely a direction that the Validation Tool development should be taking. This capability will be addressed in the subsequent phases of tool development.	Tabled
TK01	Todd King	Body (Modify)	1.7 Document Maintenance - Reference is made to the "period covered" by this document. That's very ambiguous.	Perhaps the opening phrase should be more like "It is anticipated that ..." I would also like to see a statement that "updates will be reviewed and approved by the management council or it designate." It is my impression the management council really wants to manage the scope and direction of PDS. We should acknowledge this explicitly.	<u>Open 23-Jan-06</u> Related to RAS04. <u>Addressed 26-Feb-06</u> Section (now 1.8) was reworded as follows: "It is anticipated that additional phases of development will be defined and approved by the Management Council resulting in modifications to this document. This document and the requirements specified herein, will be kept under configuration control with any modifications submitted to the Management Council for approval." <u>Closed 4-Apr-06</u> Accepted by T. King.	Closed
TK02	Todd King	Body (Modify)	2.0 Validation Tool Concept What is the "PDS Model". I have my viewpoint, but I'm not sure we all share the same vision of the "PDS Model". If the model is described somewhere then there should be document to reference. If this is no document I recommend dropping the phrase "based on the PDS Model" from the sentence.		<u>Open 23-Jan-06</u> Related to SS07. <u>Addressed 1-Mar-06</u> Removed section 2.0 per RFA RAS05. <u>Closed 4-Apr-06</u> Accepted by T. King.	Closed

**PDS Validation Tool Requirements
Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
TK03	Todd King	Derivation	2.0 Level 4 Requirements This is strange that we derive level 4 from level 2 because the level 3 are in preparation. This seems like bad practice. What is the course of action if the level 4 and level 5 requirements do not reconcile with the emerging level 3 requirements. There are level 3 requirements which are equivalent to the level 4 requirements so the level 4 requirements are redundant.		<p><u>Open 23-Jan-06</u> Related to RAS02, SS02 and SS08.</p> <p><u>Addressed 19-Mar-06</u> The reality is that the EN is receiving pressure to develop and deploy a new validation tool from HQ, MC and missions. The tool specified by the requirements is essentially a replacement of an existing tool, with many of the requirements derived directly from the functionality of that tool or the PDS standards. So, the requirements are being developed on a best effort basis given these circumstances.</p> <p>Although there may be other relevant level 3 requirements pertaining to the Validation Tool, the main requirement (1.5.3) has been approved and the level 4 requirement derivations have been modified accordingly.</p> <p><u>Open 4-Apr-06</u> Not accepted by T. King.</p> <p><u>Addressed 16-Jul-06</u> As a result of the newly approved level 3 requirements, the level 4 requirements were retraced and modified slightly including collapsing L4.VAL.FR.1.1 and L4.VAL.FR.1.2 into L4.VAL.FR.1 and adding L4.VAL.FR.3.</p>	Addressed
TK04	Todd King	Body (Modify)	Why the statement that "For the purpose of this document, archival product has been equated to a data product"? There is a difference between "archival product" and "data product". I think an "archival product" is a validated (and possibly reviewed) "data product". That is, an "archival product" is a "data product" which is ready for archiving. So, I don't think we should use the two terms as interchangeable equivalents.		<p><u>Open 23-Jan-06</u></p> <p><u>Addressed 26-Feb-06</u> Removed the offending statement.</p> <p><u>Open 4-Apr-06</u> Not accepted by T. King.</p> <p><u>Addressed 16-Jul-06</u> The first paragraph of section 2.0 has been reworded as a result of the newly approved level 3 requirements, thus removing the replacement statement for the previously removed offending statement.</p>	Addressed

**PDS Validation Tool Requirements
Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
TK05	Todd King	Derivation	4.0 Level 5 Requirements Why are non-functional requirements derived from other sources? Even non-functional requirements should be traceable to a higher level requirement. I think requirements such as those for documentation and user guides can be derived from the level 2 requirements rather than "other sources".		<p><u>Open 23-Jan-06</u> Related to TK17.</p> <p><u>Tabled 19-Mar-06</u> Once all of the level 3 requirements are approved, the level 4 and 5 requirements and their traceability will be reevaluated.</p> <p><u>Open 4-Apr-06</u> Not accepted by T. King.</p> <p><u>Addressed 19-Jul-06</u> Reworded the offending sentence as follows: "The non-functional requirements are derived from the level 4 requirements, the Tools Survey [4] and existing capabilities from the current generation of tools."</p>	Addressed
TK06	Todd King	Requirement (Modify)	L5.VAL.FR.(2). In ODL there are just objects and elements, yet the term "data element" is used. Drop the word "data" in each of these requirements.		<p><u>Open 23-Jan-06</u></p> <p><u>Addressed 26-Feb-06</u> Every occurrence of "data element" in the document was changed to "element".</p> <p><u>Closed 4-Apr-06</u> Accepted by T. King.</p>	Closed
TK07	Todd King	Requirement (Add)	<p>L5.VAL.FR.(2) There is no requirement that validation is to use the appropriate version of the PSDD. Perhaps a requirement such as:</p> <p>L5.VAL.FR.2.X - The Tool shall use the appropriate version of the PSDD.</p>		<p><u>Open 23-Jan-06</u> Related to TK24.</p> <p><u>Addressed 26-Mar-06</u> What exactly is the appropriate version of the PSDD for any given execution of the tool? The tool should validate its target based on the PSDD specified. It is up to the user to determine the desired version of the PSDD.</p> <p><u>Open 4-Apr-06</u> Not accepted by T. King.</p> <p><u>Addressed 6-Jul-06</u> At this point in time there is not enough information in a PDS label or the PSDD to determine the appropriate version, so a requirement will not be added. This action was proposed and concurred with at the 1-Jun-2006 telecon.</p>	Addressed

**PDS Validation Tool Requirements
Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
TK08	Todd King	Requirement (Modify)	<p>L5.VAL.FR.2.3 (c) Replace ...</p> <p>That all STATIC and DYNAMIC (enumerated) data element values are specified in the PSDD.</p> <p>with...</p> <p>That all element values constrained by enumerated lists (STATIC and DYNAMIC) are an allowed value as specified in the PSDD.</p>		<p><u>Open 23-Jan-06</u></p> <p><u>Addressed 26-Feb-06</u> Requirement L5.VAL.FR.2.3 item c) was reworded as follows: "That all element values constrained by enumerated lists (STATIC and DYNAMIC) are allowed values as specified in the PSDD."</p> <p><u>Closed 4-Apr-06</u> Accepted by T. King.</p>	Closed
TK09	Todd King	Requirement (Modify/Add)	<p>L5.VAL.FR.(3)</p> <p>There is a corollary for this requirement which is missing. To properly validate a label any pointer which requires an corresponding object must be checked. Its not enough to look for the presence of object which must have a pointer defined.</p> <p>The use of "data pointer" and "data object" is a little confusing. Again there are elements and object. When an element is a pointer there should be a corresponding object. However, not all pointers require a object. The element "STRUCTURE" is an example.</p>		<p><u>Open 23-Jan-06</u></p> <p><u>Addressed 26-Mar-06</u> Requirement L5.VAL.FR.3 was reworded to "The Tool shall verify that a data object exists when referenced by a pointer in the PDS label." This wording is more in line with the new L5.VAL.FR.19 requirement. Also replaced "data pointer" with "pointer". The "data object" reference in this requirement is valid as defined in chapter 4.</p>	Addressed
TK10	Todd King	Requirement (Add)	<p>There is also a missing requirement to check that external files referenced by a pointer exist. A really important one for validation. It might be worded:</p> <p>L5.VAL.FR.X - The Tool shall verify that a file referenced by a pointer exists.</p>		<p><u>Open 23-Jan-06</u> Related to SS13.</p> <p><u>Addressed 26-Mar-06</u> Requirement L5.VAL.FR.19 (The Tool shall verify that a file exists when referenced by a pointer in the PDS label.) was added to the document.</p> <p><u>Closed 4-Apr-06</u> Accepted by T. King</p>	Closed
TK11	Todd King	Requirement (Modify)	<p>L5.VAL.FR.(9) and LR.VAL.FR.(10) (h) Change "Invalid ASCII" to "The presence of invalid ASCII". (i) Are "I" format fields always required to be right justified?</p>		<p><u>Open 23-Jan-06</u></p>	Open

**PDS Validation Tool Requirements
Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
TK12	Todd King	Requirement (Remove)	L5.VAL.FR.(17) Why do we want this capability? We should preserve the entire data dictionary, not subsets.		<p><u>Open 23-Jan-06</u> Related to DT03 and RAS16.</p> <p><u>Addressed 27-Mar-06</u> There was quite a bit of discussion regarding this requirement during the review and the feedback regarding the capability it describes was pretty positive. It is my understanding that ddict offers some of what is described by L5.VAL.FR.17. This requirement was slightly reworded as a result of RFA SH02. Dick pointed out in RFA RAS16 that this requirement may be better suited as a generation tool requirement. If that is the consensus, then I will pull it from this document.</p> <p><u>Open 4-Apr-06</u> Not accepted by T. King.</p> <p><u>Addressed 5-Jul-06</u> Requirements L5.VAL.FR.16 and L5.VAL.FR.17 were deleted. This action was proposed and concurred with at the 1-Jun-2006 telecon.</p>	Addressed
TK13	Todd King	Requirement (Move)	L5.VAL.NF.(3) This is a functional requirement like L5.VAL.FR.(14). It's a form of reporting. Perhaps we should add a "PASS/FAIL" level of reporting to L5.VAL.FR.(14).		<p><u>Open 23-Jan-06</u> Related to TK29.</p> <p><u>Addressed 28-Mar-06</u> Requirement L5.VAL.NF.3 was reworded to "The Tool shall return an exit status to the calling application." This seems more appropriate for a non-functional requirement and is inline with a comment you made during the review regarding equating binary value to exit status.</p> <p><u>Open 4-Apr-06</u> Not accepted by T. King.</p> <p><u>Addressed 20-Jul-06</u> Moved requirement L5.VAL.NF.3 to the Functional Requirements section and renumbered to L5.VAL.FR.31.</p>	Addressed

**PDS Validation Tool Requirements
Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
TK14	Todd King	Requirement (Move)	L5.VAL.NF.(4) and L5.VAL.NF.(5) These are really functional requirements since you have to do something with the URI.		<p><u>Open 23-Jan-06</u></p> <p><u>Addressed 1-Apr-06</u> Requirements L5.VAL.NF.4 (The Tool shall accept the following as input for specifying the data product(s) to be validated: a) File Specification(s) b) Directory Specification(s) c) Uniform Resource Locator(s) (URL)) and L5.VAL.NF.5 (The Tool shall accept the following as input for specifying the instance(s) of the PSDD to be used for validation: a) File Specification(s) b) Uniform Resource Locator(s) (URL)) were reworded to convey more of the interface aspect. Each of these requirements also have a corresponding functional requirement in L5.VAL.FR.21 and L5.VAL.FR.2, respectively.</p> <p><u>Open 4-Apr-06</u> Not accepted by T. King.</p> <p><u>Addressed 20-Jul-06</u> Moved requirements L5.VAL.NF.4 and L5.VAL.NF.5 to the Functional Requirements section and renumbered to L5.VAL.FR.32 and L5.VAL.FR.33, respectively.</p>	Addressed
TK15	Todd King	Requirement (Modify)	Do we really want URI rather than the more specific URL or URN. A URI includes both of these. Adopting a URL as the primary method of reference avoids the need for a registration service for URN. URLs are much more direct and easier to maintain then a database of URN.		<p><u>Open 23-Jan-06</u></p> <p><u>Addressed 1-Apr-06</u> Requirements L5.VAL.NF.4 and L5.VAL.NF.5 were modified replacing "URI" with "URL".</p> <p><u>Closed 4-Apr-06</u> Accepted by T. King.</p>	Closed
TK16	Todd King	Requirement (Modify)	L5.VAL.NF.(7) What is the purpose of the log file? I realize there may be some use for reporting problems, but capturing the actual command line and output is often more informative.		<p><u>Open 23-Jan-06</u></p> <p><u>Addressed 27-Mar-06</u> Requirement L5.VAL.NF.7 was deleted and replaced by requirement L5.VAL.FR.20, specifying that the validation report should include certain tool information, as well as requirement L5.VAL.NF.11, specifying the delivery methods of the actual report.</p> <p><u>Closed 4-Apr-06</u> Accepted by T. King.</p>	Closed
TK17	Todd King	Body (Modify)	The introductory text in Level 5 Requirements states that functional requirements are derived only from the level 4 requirement (which is not an M/C approved requirement) and that non-functional requirements are derived from all other sources. This just isn't true. All requirements, functional and non-functional, are derived from all sources including M/C approved requirements.	Change wording to something like: "The Level 5 requirements flow from higher level requirements and, in some cases, are derived from existing standards or needs expressed by users."	<p><u>Open 3-Apr-06</u> Related to TK05.</p> <p><u>Addressed 19-Jul-06</u> Reworded the offending sentence as follows: "The non-functional requirements are derived from the level 4 requirements, the Tools Survey [4] and existing capabilities from the current generation of tools."</p>	Addressed

**PDS Validation Tool Requirements
Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
TK18	Todd King	Requirement (Modify)	L5.VAL.FR.23: It should be possible to validate a label without including the ^STRUCTURE content. This will permit validation of the unaltered content of a label. It should be possible to independently validate a file containing a label fragment such as a "STRUCTURE" description.	In L5.VAL.FR.23 change "shall" to "shall be able to". Add a new requirement that reads: The tool shall be able to validate a label fragment which can be referenced by a structure pointer (^STRUCTURE).	<u>Open 3-Apr-06</u> Related to SS14. <u>Addressed 16-Jul-06</u> Modified requirement L5.VAL.FR.23 to be (The Tool shall be able to merge the contents of label fragments referenced by ^STRUCTURE pointers with the contents of the parent label when validating a PDS label.). The rest of this RFA has been resolved by the proposal for action item 2 from the 1-Jun-2006 telecon. Requirements L5.VAL.FR.27 (The Tool shall validate a PDS label fragment as it would a PDS label with the following exceptions: a) An SFDU label must not be contained in the label fragment. b) A PDS_VERSION_ID statement must not be contained in the label fragment. c) An END statement must not be contained in the label fragment.) and L5.VAL.FR.28 (The Tool shall identify files having an extension of FMT as a PDS label fragment.) were added to the document.	Addressed
TK19	Todd King	Requirement (Add)	L5.VAL.FR.21 does not describe the entire need. We need to be able to validate the content of directory and tree.	Add the following requirements: (1) The Tool shall be able to validate all PDS data products in a directory. (2) The Tool shall be able to traverse a directory tree and recursively validate the content of all directories.	<u>Open 3-Apr-06</u> Related to SS20. <u>Addressed 16-Jul-06</u> Requirements L5.VAL.FR.29 (The Tool shall be able to validate all PDS data products in a directory.) and L5.VAL.FR.30 (The Tool shall be able to traverse a directory tree and recursively validate the content of all directories.) were added to the document.	Addressed
TK20	Todd King	Body (Modify)	3.1.2 – The last sentence in the introduction refer "to other chapters of the reference". We should list these chapters. Throughout the document if a requirement is derived from the standards document we should reference the chapter and section.	Chapter 5 is very relevant to syntactic validation, I'll leave reconciliation of other requirements to the standards document to the Validation Tool team.	<u>Open 3-Apr-06</u> <u>Addressed 19-Jul-06</u> Reworded the sentence in section 3.1.2 to be "Additional extensions and constraints on ODL can also be found in chapters 5 and 7 of the reference." Other requirements that were derived from the standards were updated to cite the source.	Addressed
TK21	Todd King	Requirement (Modify/Add)	L5.VAL.FR.24 and L5.VAL.FR.25 are restatements of Section 5.1.2 of the Standards Reference. We should reference the section as a source. If we are going to include requirements derived from the standards reference there are other syntactical requirements governing the formation of dates and times (Chapter 7) line length limits (5.1.2 pp 1) label padding (5.1.2 pp 3).	Incorporate a complete list of syntactical requirements or make it two requirements. (1) Adherence to the ODL syntax as specified in chapter 12 and (2) Adherence to the PDS specific extensions and constraints as specified in chapter 5 and 7 (and others). You may want to break (2) in separate requirements for extensions and constraints.	<u>Open 3-Apr-06</u> Related to JSH01 and SS10. <u>Addressed 19-Jul-06</u> Requirements L5.VAL.FR.34, L5.VAL.FR.35, L5.VAL.FR.36 and L5.VAL.FR.37 were added to better represent requirements from chapters 5 and 7.	Addressed
TK22	Todd King	Requirement (Modify)	L5.VAL.FR.24 - Character 127 is the (del) character. While this is allowed in the standard I don't think this was intentional. We should really be allowing it.	Submit an SCR to change the allowed range of characters.	<u>Open 3-Apr-06</u> <u>Addressed 16-Jul-06</u> Modified requirement L4.VAL.FR.24 to remove 127 from the allowed list and notified Elizabeth Rye of the typo in section 5.1.2 of the standards so that she can submit an SCR.	Addressed

**PDS Validation Tool Requirements
Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
TK23	Todd King	Body (Modify)	3.1.3 Semantic Validation. There is still no requirement to support local or multiple data dictionaries other than the PSDD. The PSDD is a very specific data dictionary and the need to support other dictionaries was clearly expressed during the last telecon.	Change "specified instance(s) of the PSDD" to "one or more PDS compliant data dictionary".	Open 3-Apr-06 Related to SS12. Addressed 16-Jul-06 Requirements L5.VAL.FR.2, 2.1, 2.2 and 2.3 were modified to replace "in the specified instance(s) of the PSDD" with "as specified in one or more PDS compliant data dictionaries".	Addressed
TK24	Todd King	Requirement (Add)	Should the instance of the PSDD used for validation be determined by the value of the PDS_VERSION_ID? Currently the PDS_VERSION_ID does not have sufficient resolution to determine minor releases of the PSDD. For example, the current version is PDS3. Hopefully in the future this will be changed. Even if its not validation can use the most recent version of the major release (which is currently 3.7) when it encounters a version id of PDS3.	Add the requirement that the validation tool shall be able to select the PSDD to use for validation based on the value of the PDS_VERSION_ID element.	Open 3-Apr-06 Related to TK07. Addressed 6-Jul-06 At this point in time there is not enough information in a PDS label or the PSDD to determine the appropriate version, so a requirement will not be added. This action was proposed and concurred with at the 1-Jun-2006 telecon.	Addressed
TK25	Todd King	Requirement (Remove)	SCR 3-1034 addresses only checksums which are maintained external to the product. There is no requirement or expectation that checksums will be in the label. Requirements L5.VAL.FR.5 and L5.VAL.FR.7 are no longer relevant	Remove L5.VAL.FR.5 and L5.VAL.FR.7	Open 3-Apr-06 Related to MG01, RAS08 and SS15. Addressed 5-Jul-06 Deleted requirements L5.VAL.FR.5 and L5.VAL.FR.7. This action was proposed and concurred with at the 1-Jun-2006 telecon.	Addressed
TK26	Todd King	Requirement (Modify/Add)	L5.VAL.FR.9 – The information in the note regarding the differences for ASCII and binary is important and should be included in the requirements.	Break (a) into two requirements one for columns and one for rows. Limit column check to ASCII only. Limit (e) to ASCII only. Limit (f) to ASCII only. Limit (i) to ASCII and remove "not". We want to validate the "Record is properly delimited"	Open 3-Apr-06	Open
TK27	Todd King	Requirement (Modify)	L5.VAL.FR.10 – affirmative statement of requirement.	Item (i) remove "not". We want to validate the "Record is properly delimited"	Open 3-Apr-06	Open
TK28	Todd King	Requirement (Modify)	L5.VAL.FR.14 (b) – "abridged" to too ambiguous. The parenthetical comment should be an explicit part of the requirement.	Change wording to "Summary – where the set of detected anomalies are summarized by reporting the number of occurrences for each type of anomaly and providing the location of one example of anomaly." Actually I would like to have a description of the anomaly and a list of all products the anomaly occurred in, but some might not consider this a summary.	Open 3-Apr-06 Addressed 20-Jul-06 Changed the wording as requested.	Addressed
TK29	Todd King	Requirement (Move)	L5.VAL.NF.3 – This is really a functional requirement and should be under "Reporting 3.1.5"	Move under 3.1.5.	Open 3-Apr-06 Addressed 20-Jul-06 Moved requirement L5.VAL.NF.3 to the Functional Requirements section and renumbered to L5.VAL.FR.31.	Addressed

**PDS Validation Tool Requirements
Requests For Action (RFA)**

RFA #	Submitter	Topic	Concern	Recommendation	Action	Status
TK30	Todd King	Requirement (Modify)	L5.VAL.NF.6 – What will be the configurable parameters? This is too vague. I'm assuming this requirement is for things like whether or not to recurse a directory structure, what level of reporting, what dictionaries to use, and so on. How will this be passed to the tool? For the command line interface will these be passed as command-line arguments or in a configuration file? On the other hand it may be for things like the default location of the PSDD or e-mail to send reports which may be stored in a configuration file.	Clarify the purpose.	<p><u>Open 3-Apr-06</u></p> <p><u>Addressed 20-Jul-06</u> Requirement L5.VAL.NF.6 was modified to include the methods as to how the parameters will be supplied to the tool. As far as the detail concerning the exact parameters, I have opted to cover that in the design phase and if fact it was discussed during the 1-Jun-2006 telecon.</p>	Addressed
TK31	Todd King	Process	RFA Actions – some RFA actions are more explanations of why the request is being ignored and the status of the RFA is marked as "addressed". See RAS02RAS16, SS02, SS08, SS21, TK03, TK12	Shouldn't the author of the RFA determine whether their request for action has been addressed.	<p><u>Open 3-Apr-06</u></p> <p><u>Addressed 10-May-06</u> We opted not to use a status of "Rejected", so yes some actions are explanations justifying no action. As stated in the Legend of this document, the "Addressed" status indicates that an action has been defined but not yet accepted by the author. The "Closed" status indicates acceptance by the author.</p>	Addressed

PDS Validation Tool Requirements Requests For Action (RFA) Legend

Status	Description
Open	An action has yet to be defined.
Addressed	An action for the RFA has been defined but not yet accepted by the author.
Tabled	Waiting on some other milestone before the RFA can be addressed.
Closed	The action defined for the RFA was accepted by the author.